E&S UPDATE

Vol. II No. 5 June, 1990

Annual Awards Night Rated Success

The HQ AFESC commander cited seven people at the Center's annual awards banquet May 4.

Col. Roy G. Kennington also presented 77 awards for excellence, and cited all Center award winners during the past year.

Keynoter for the event, Maj. Gen. Joseph A. Ahearn, director, engineering and Services, HQ USAF, lauded the achievements of each individual.

Meritorious Achievement Awards

The awards are given to military or civilian personnel assigned to the Center, recognizing them for outstanding contributions to professionalism in engineering or applied disciplines during 1989. Each recipient also receives an award from the Air Force Association recognizing the outstanding contributions Air Force Engineering and Services personnel make to the Air Force mission.

Winners are:

Lt. Col. F. Thomas Lubozynski, RDV, whose environmental research was judged superior by the Scientific Advisory Board, congressional staffers, and the secretariat levels in the Air Force and Department of Defense. He gained U.S. Environmental Protection Agency support and interest for RDV research efforts.

Capt. Wayne P. Chepren, RDV, initiated new contractual mechanisms to expand the capabilities of the laboratory. He developed an enhanced system for presenting research ideas to senior management which provided vital project information on research efforts for higher headquarters'

See AWARDS, p. 2

Commander's Award for Excellence

Winners of the 1989 Commander's Award for Excellence are listed on page 6.

AFESC's Rita Gregory is Nominated For 'Distinguished Civilian' Award

Rita A. Gregory, Director of Construction Cost Management, HQ AFESC, has been nominated for the prestigious Department of Defense Distinguished Civilian Award.

In nominating Mrs. Gregory Col. Roy G. Kennington, Commander, HQ AFESC, noted that she is "responsible for validating the multibillion dollar worldwide Air Force Construction Program and is the designated DoD and Air Force System Acquisition Review Council Team Chief for the facilities portion of the formal Independent Cost Analysis process."

(Law requires an Independent Cost Analysis for all weapon systems acquisition programs at every major milestone decision point.)

She also developed the Construction Cost Management Analysis System, a revolutionary construction cost management technique.

It "facilitates the correlation and analytical predictions of costs associated with construction projects," Colonel Kennington

see GREGORY, p. 3

'89 Services Award Winners Announced

Gen. Larry D. Welch, Air Force Chief of Staff, has announced the services award winners for 1989. In his message General Welch congratulated the winners, as well as all nominees for the awards.

Award winners and runners-up (runners-up in parentheses) are:

Outstanding Services Senior Military Manager of the Year --Lt. Col. Alfred H. Perrie, III, 15th Services Squadron, Hickam AFB, Hawaii (Lt. Col. Donald E. Anderson, 7th Services Squadron, Carswell AFB, Texas).

Outstanding Services Military Manager of the Year -- Capt. Larry D. Carothers, 343rd Services Squadron, Eielson AFB, Alaska

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Awards Banquet Honors Center Employees

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augmentation and funding decisions.

SMSgt. Edward G. McAteer, MSLG, created and assembled the Command Management Evaluation and Inspection Team, providing valuable command guidance on supply policy, and procedures for accountability and control of government property. Sergeant McAteer has set the standard for outstanding logistics support.

TSgt. Jim B. Whitcomb, RDV, transformed the Environics Division's equipment accountability status and streamlined accountability by establishing well-documented procedures and operating instructions. He saved tens of thousands of dollars in lost research opportunities by ensuring that resources were in place when needed.

Myron C. Anderson, DEM, participated in infrastructure evaluations at Edwards and Vandenberg AFBs to prevent interruption of mission-essential utility services. He initiated an Operations and Maintenance Technical Assistance Program to help bring our treatment plants into EPA compliance.

Gary W. Brindley, RDX, developed a comprehensive financial analysis sheet for the Financial Monthly Review of laboratory funding by senior management, allowing timely and accurate decisions on obligations and expenditures. He developed and implemented a 5-year computer plan for the entire laboratory, allowing for both growth and computing power expansion to increase researchers' capabilities.

Ramon A. Monroe, DPP, provided guidance to each command for the management of the 1989 Services Awards, assuring timely submissions and program integrity. He established procedures for assuring data reliability and purification of record components.

Prior Achievements

Recognized for attending professional military education courses were those who had attended Noncommissioned Officer Leadership School , Noncommissioned Officer Academy, Senior Noncommissioned Officer Academy, and Air War College.

Recognized for education degree completion were: Rochell Humes, RDCM, associate's degree from Gulf Coast Community College, Business Administration; Charles E. Bailey, RDC, master's degree, University of Florida, Civil Engineering; Capt. Wayne P. Chepren, RDV, Ph. D., Air Force Institute of Technology, Aeronautical Engineering.

Cited for achieving professional certifications were: Bailey, RDC, Professional Engineer (PE), civil engineering; Capt. Wayne P. Chepren, RDV, mechanical engineering; Capt. Mark D. Smith, RDV, Engineer in Training; Capt. Michael G. Elliot, CCE, PE, civil engineering; Capt. Mark S. Buncher, DEM, PE, civil engineering; and SSgt. Robert G. Lindstrom, Det 2, National Emergency Medical Technician.

Honored by Tyndall AFB as the Federal Women's Program Outstanding Woman of the Year - 1989, (GS 3-6) was Mary E. Reynolds, RDXI.

Recognized within HQ AFESC during the year were: Airman of the Quarter - - Amn. Paul D. Horning, RD, for July-Sept.; Airman of the Year - 1989 - - SrA. Christopher A. White; Noncommissioned Officer of the Quarter - - TSgt. Richard C. Johnson, RDC, Jan.-Mar.; TSgt. Hazel M. O'Brien, SI, Apr.-June; SSgt. Ronald J. Bilak, MSLG, July-Sept.; SSgt. Alex B. McIlwain, MSIM, Oct.-Dec.; Noncommissioned Officer of the Year, 1989 - - TSgt. Douglas D. Thomas, Det. 2; Senior Noncommissioned Officer of the Quarter - - MSgt. Robert M. Henderson, IME, Jan.-Mar.; MSgt. Donald L. Brannam, DEM, Apr.-June; MSgt. Earl G. Powell, SI, July-Sept.; SMSgt. Anthony D. Mullinax, DEM, Oct.-Dec.; Senior Noncommissioned Officer of the Year, 1989 - - MSgt. Donald L. Brannam.

AFESC Nominee for the Air Force Top 12 Airmen of the Year, 1989 - - MSgt. Donald L. Brannam, DEM.

Company Grade Officer of the Quarter - - 1st Lt. Andrew D. Ingram, YE, Jan.-Mar.; Capt. Edward F. Shock, SI, Apr.-June; Capt. David G. Young, SIO, July-Sept.; Capt. John C. Rogers, DEM, Oct.-Dec.; Company Grade Officer of the Year, 1989 - - Capt. David G. Young, SIO.

Civilian of the Quarter, GS-7 and Below, Marilyn S. Stout, ULT, Jan.-Mar.; Willie J. Ware, DEMP, Apr.-June; Linda J. Allen, DEC, July-Sept.; Marion D. Gwyn, RD, Oct.-Dec.

GS-8 through GS-12 -- Charles W. Risinger, RDCF, Jan.-Mar.; Dr. Ronald B. Hartzer, HO, Apr.-June; Robert W. McMahon, DEOX, July-Sept.; Dr. Joseph D. Wander, RDVS, Oct.-Dec.

Civilian of the Year, 1989, GS-7 and Below -- Stout, ULT; GS-8 through GS-12 -- Risinger, RDCF.

AFESC Outstanding Information Management Awards, 1989: Senior Enlisted Information Manager of the Year, MSgt. Robert M. Henderson III, IME; Intermediate Enlisted Information Manager of the Year, SSgt. Alex B. McIlwain, IME; Intermediate Civilian Information Manager of the Year, Juanita A. Prater, DEH; Junior Civilian Information Manager of the Year, Eva M. Cutchen, DEHF.

Senior Supply Manager of the Year, Maj. William H. Martin, DEMG; Supply Superintendent of the Year, SMSgt. Edward G. McAteer, MSLG; Senior Staff Supply Technician of the Year, TSgt. Jim B. Whitcomb, RDV; Staff Supply NCO of the Year, TSgt. Keith A. Wright, MSLG; Junior Supply Technician of the Year, Sgt. Richard M. Hardy, CEMIRT; Civilian Supply Supervisor of the Year, Vernon Briggs, CEMIRT; Junior Supply Manager of the Year, James D. Ramsey, DEMG; Most Outstanding Supply Activity, 1989 - - Operating Location-K, Travis AFB, Calif., CEMIRT, James Harvey, manager.

Individual Mobilization Augmentee, Officer of the Year, Maj. Kathryn A. Meyers, DEH; IMA Airman of the Year, SMSgt. Jackie D. Burgess, DEM.

UPDATE

Col. Roy G. Kennington
Commander, HQ AFESC
Col. George T. Murphy
Vice Commander, HQ AFESC
Capt. Randy E. Sipe
Director, Public Affairs
H. Perry Sullivan, Jr.
Deputy Director, Editor
MSgt. Phil Reynolds
Associate Editor

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At AFMPC

Daugherty Named E&S Civilian Career Manager

by Perry Sullivan

The new manager of the Air Force Engineering and Services Civilian Career Management Program at the Air Force Civilian Personnel Center, Randolph AFB, Texas, is an engineer from HQ Air Force Engineering and Services Center, Tyndall AFB, Fla.

Gary C. Flora, assistant director, Engineering and Services, HQ U.S. Air Force, Washington, D.C., announced that Patrick C. Daugherty, a registered professional engineer, is the new program coordinator.

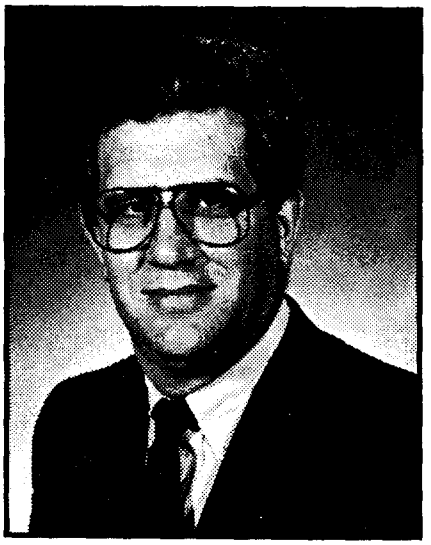
Daugherty succeeds Patrick Mumme, also a former HQ AFESC engineer, who resigned to enter private industry.

Program Advantages

More than 4,200 Air Force civil engineering and services professional-level personnel are signed up for the program. Key program elements include meaningful career educational opportunities, eligibility for select positions throughout the Air Force, and providing selected officials expanded lists of certified eligible applicants for key positions than otherwise available.

Daugherty, who now lives in Panama City, Fla., is currently the top internal consultant for the operations and maintenance of Air Force worldwide installations of air conditioning and refrigeration systems. He works in the Operations and Maintenance directorate at the Center.

Daugherty came to the Center in September, 1987 from the office



Daugherty

of the Air Force Regional Civil Engineer, Eastern Region, Atlanta, where he was a military construction program project engineer. Previously he guided installation requirements planning for the installation of the Phase IV computer program at Gunter AFS, Ala.

Engineering Veteran

He started with the Air Force in March, 1972, as a civil engineering officer with the 36th Civil Engineering Sq., Bitburg AB, Germany, responsible for operations and maintenance of facilities, pavements and grounds.

Later, he moved to Maxwell AFB, Ala., where he was a mechanical engineer for the base civil engineering organization, responsible for design of HVAC, petroleum, oil and lubricant systems, and plumbing systems.

A graduate of Memphis State University, Memphis, Tenn., he earned the bachelor of science degree in Mechanical Engineering in 1972. He is a registered professional engineer in Alabama, a member of the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), and a member of ASHRAE's guidelines committee for commissioning of HVAC systems.

Gregory Nominated for Top DoD Civilian Award

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said, and added, "This system has been acclaimed to be the single most significant breakthrough in the construction industry this decade."

Among Mrs. Gregory's other accomplishments:

In FY '89 her directorate did ICAs on more than $15 billion worth of facilities.

She was the lead engineer on the first Air Force privatization team.

She helped develop the Automated Air Force Pricing Guide.

She was among the first to propose concepts for stand-off weapons to increase manned aircraft survivability.

"Her advice and counsel are... sought by distinguished executives in industry, the Air Force, sister Services, DoD, and other Federal agencies," Colonel Kennington said.

She has a BS in mathematics and physics and an MA in public administration and is working on a PhD in engineering from the University of Florida. She is a graduate of the Air Command and Staff College; the Base Civil Engineer Staff Officers Course; Special Operations School; Combat Operations School; Counterinsurgency Course; and the U.S. Navy Fleet and Mine Warfare Training Center, Mine Warfare Familiarization Course.

A registered Professional Engineer and a Certified Cost Analyst, Mrs. Gregory was named the 1987 Engineer of the Year for the Air Force by the National Society of Professional Engineers and was named one of the Top Ten Federal Engineers nationwide.

Guest Editorial:

Learning to Manage the Global Environment

Col. Frank P. Gallagher III, BSC
Deputy Director,
Engineering & Services Lab

The thirty-second Air Force Academy Assembly Mar. 12-17 addressed "Managing the Global Environment." I attended as an appointed senior observer.

Each year since 1959 the assembly has addressed current international topics, in a forum sponsored by the faculty and cadet students of the Academy's Political Science Department. Among those attending are students from universities and colleges across the U.S., Canada and abroad, sponsored by the Academy. This creates excellent opportunities for an exchange of ideas and the discussion of major issues with outstanding scholars and practitioners. The Assembly's final report is widely distributed among government officials and academia.

After more than 22 years of experience in environmental engineering and environmental

"The Assembly gave me a new and wider perspective on environmental issues..."

program management, I was admittedly cynical about what I would gain from the Assembly, but I was wrong. The Assembly gave me a new and wider perspective on environmental issues facing the Air Force, our nation and the world in the '90s.

This year's Assembly addressed global environmental issues. Ten student roundtables (less than 10 percent were cadets), led by senior participants, met in five successive morning or afternoon sessions. There were four plenary sessions including keynote address, panel discussions, report preparation and a banquet.

Dr. Noel Brown, keynote speaker and special representative of the North American United Nations Program (UNEP) office,

"...the '90s are perhaps the last...opportunity to reverse present dangers..."

described a new emerging perspective of the world as our planetary home. He saw the boundaries of sovereignty of shrinking importance in light of global environmental challenges facing man today. He said the '90s are perhaps the last window of opportunity to reverse present dangers by developing geopolitical solutions. To accomplish these changes, he cited the need to mobilize the best and brightest minds, and relate the environment to the moral leadership.

The Assembly tried to identify pressing and dangerous environmental problems. These problems, such as acid rain, affect the global commons: air, waterways, land and bioadversity. Contributing causes for each were determined and the most serious human practices were identified. A "top-down" strategy to address these practices involved international organizations, national governments and multinational corporations, all of which would be encouraged to create environmental recovery opportunities. Concurrently, grass roots move-

"The world now lacks the political tools to deal with the global environmental problems at hand."

ments were identified for mobilization to remedy political and economic constraints.

The world now lacks the political tools to deal with the global environmental problems at hand. A priority responsibility of developed nations was seen as assisting the third world in protecting their own natural resources from exploration. Discussed were environmental payments to the impoverished nations encouraging development of political stewards of the land; and wealth sharing.

New international organizations, like the European Common Market, may be models where nations come together without sovereignty to accomplish a common good.

The Assembly participants concluded with a grim and apocalyptic forecast that could only be offset by major attitude changes and politico-social restructuring.

The Assembly was a tremendous opportunity for a member of the Engineering and Services staff. I gained valuable insight into environmental issues from a geopolitical perspective. This perspective must now influence how I view our environmental programs, our research directions, and the

"Our new view must be like planning for a deep-probe space station, mindful of every environmental transaction."

technologies, policies and programs we achieve.

Until now, our Air Force global view has largely reflected our presence in many differing parts of our geography, and in space. Our new view must be like planning for a deep-probe space station, mindful of every environmental transaction, and its relationship to all the others. This is our spaceship, and the environment is ours to nurture or to destroy.

Public policy in an increasingly

see GLOBAL, p. 5

Partnering: Working Together for the Good of the Project

by Joe Hartnett

A fight was brewing. The $4-million project begun in November 1989 to renovate 100 houses at Patrick AFB was bogged down in delays and heading toward litigation.

The Air Force project managers and the contractor were pointing fingers at each other.

Plans called for the contractor, Mitchell Construction Co., to first build a prototype house so the Base Civil Engineer could see the quality of construction.

But from the start, communication was poor. In only one month, a total lack of trust between the contractor and the project managers had developed.

Rick Mitchell, owner of the construction company, and the Air Force project managers decided to take a look at how they, and many others in similar circumstances, do business.

The normal adversarial relationship between owners and construction contractors creates an environment that jeopardizes the success of the projects. But when the goals and objectives of the contracting parties are examined, it's clear that both parties would benefit from uninhibited communication aimed at sharing goals, risks, and objectives.

Partnering involves developing a cooperative management team with key players from the organizations involved in the construction contract. It focuses efforts on problem resolution, not posturing and litigation.

Lt. Col. Seth Heywood, the Base Civil Engineer, knew of a U.S. Army Corps of Engineers initiative called "partnering" and arranged a briefing on this concept for Rick Mitchell. Mitchell was so enthusiastic that he agreed to share the $2,000 workshop cost.

Everyone was initially skeptical, but made a strong up-front commitment to the process.

On the first day, the group began working as a team to understand how each member operates and how the group could achieve synergy, the force that yields results beyond the sum of the individual efforts. The process formed basic trust among team members.

This strategy became the blueprint for solving future problems. Members identified situations that would require various people's attention to resolve particular types of issues. They outlined a time-sensitive, step-by-step process to solve problems.

The prototype house was completed and accepted. Design details were resolved. Communications were working . Six other houses were in progress, with no appreciable problems.

If this sounds too good to be true, team members will share their knowledge and experience. Call Colonel Heywood at 407-494-4041/AV-854-4041 or Mr. Joe Hartnett at 407-494-2234/AV-854-2234.

Computer Program Development Lets SPACECOM Automate Some Remote Sites Without WIMS

Space Command automates sites?

So what--under WIMS, everyone is automated, right? Well . . . not exactly.

Space Command has 46 locations scattered around the world. Of these, 43 are contractor operated sites and only 25 have civil engineering missions. Since many are remote and have only an average of 20 civil engineering personnel, WIMS was not feasible. That leaves only three Space Command bases with WIMS capability.

To overcome the lack of standardization and automation at the non-WIMS sites, a working group was established to find a solution. Representatives from Space Command sites and other major commands were invited to participate and asked to bring samples of any data base software they used. Since some site personnel barely knew how to turn on a computer, the primary consideration in the software selection was its ease of use.

Symantec's Q&A data base software was selected because of its user-friendliness and because

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Global Problems Need Management (from page 4)

democratic world must protect these most vital of our resources. Remember, public opinion in the Soviet Union was dramatically turned toward a safer environment after the disaster at Chernobyl. A significant driver of public opinion in the eastern European nations may well have been environmental abuse and neglect, and its toll on human and natural resources.

Air Force policy must reflect the commitment of our national leadership, and a sensitivity for the well-being of our own people. Air Force civil engineers and environmental managers must work diligently to provide ways to make our service function as an instrument of defense -- of the nation and of its environment.

Commander's Award for Excellence Goes To 77 Workers at AFESC, Other Offices

This award is given to individuals or organizations, either within or outside the Center, who have rendered superior support through their service, total involvement, or dedication in making AFESC an outstanding organization.

Here is the honor roll of winners:

Maj. Michael D. Cooley, DEMGR, primarily for his work selling the Simplified Acquisition of Base Engineering Requirements (SABER) program, to the MAJCOMs and bases.

Maj. Michael L. Shelley, RDVC, largely for mapping out a long-range research strategy to meet field environmental research requirements to the year 2010.

Capt. Edward G. Marchand, RDVW, for his work on the new, improved prototype base fire training facility, utilizing his chemical engineering expertise.

Capt. Gary A. Henderson, SIW, for providing quality control of all Work Information Management System (WIMS) software before worldwide release, and development and implementation of software that writes other software, shortening the development cycle from 3 weeks to 30 minutes and simplifying it.

Capt. Gregory R. Kincaid, SIT, for design and implementation of the E&S telecommunications requirements, linking six AMMUS computers and one control system.

Capt. John R. Floden, RDCF, for his work on the the Halon Replacement Program, ensuring the Air Force will have the firefighting resources needed to maintain operational readiness.

Capt. Richard A. Reid, RDCS, nominated to be Air Force Deputy Test Director of the OSD-funded $6 million tri-service joint test and evaluation, and the sole U.S. representative on U.S./Israeli research and design team to develop innovative protective structures.

MSgt. Clifford Snipe, DEMCC, who identified a corrosion problem in AFFF firefighting systems at the Greater Pittsburgh International Airport and developed a corrective feed water treatment procedure.

MSgt. Peter G. Slatcoff, MSVG, who saved $150,000, increased local production, and decreased audiovisual work backlog by 80 percent, and who used his computer-aided design skills to help the implementation of the Air Force Academy Automated Engineering Applications program, the AF SPACECOM automated mapping program system for Peterson and Falcon AFBs, and the innovative state-of-the-art Lowry AFB services school learning resource center project.

MSgt. David R. Worthen, SIO, who planned and directed the equipment installation for the 9700 area remote computer system, providing automation management for the complete system beddown.

TSgt. Owen B. Davies, Det. 2, who ensured training conducted at Det. 2 enhanced the home station training of services personnel.

Capt. Thomas D. Quasney, DEOT, for guiding two contractors in developing a computer simulation trainer for all three Rapid Runway Repair (RRR) methods, and developing a comprehensive strategy and plan to relocate the Det. 2/AFESC training complex.

Capt. John C. Rogers, DEMG, Air Force functional manager for the Career Progression Group (CPG) biannual review, which ensures CPGs are structured to preclude chronic imbalances in manning of 17 civil engineering AFSCs.

Capt. Edward F. Shock, SIS, who led an initiative to automate human remains processing at the Air Force east and west coast mortuaries following mass fatality incidents.

1st Lt. Andrew D. Ingram, YER, who transitioned a $20 million R&D program through OT&E into a fielded Repair Quality Criteria (RQC) technical order.

Chief Warrant Officer-4 Bobby F. Barrow, RDCF, for conducting successful RDT&E of an in-cabinet computer fire protection system, which will save the Air Force $2.5 million annually.

CMSgt. John V. Rauch, Det. 2, AFESC/CEM, who established a command and control function to increase realism of the base recovery after attack training program and streamlined our effectiveness.

SMSgt. Leon W. Huntoon, DEHRD, a key player in the development of the first Services wartime task and training standards.

SMSgt. Richard B. Smith, RDCS, spearheaded the construction of the antipenetration laboratory, which provided the means for testing various protection schemes against highly accorate, advanced penetrating weapons. He developed the design and directed the construction of a five-ton overhead crane rail system for the movement of test articles and equipment and designed the shielding for the data acquisition devices, high-speed cameras, and flash x-ray equipment.

SMSgt. Ronald L. Aitken, DEOX, whose extraordinary efforts in managing and controlling classified material needed to support AFESC activities were recognized by an overall rating of outstanding on the last Communications Security (COMSEC) inspection, the first time ever for AFESC.

MSgt. Michael L. Sonnenberg, DEMP, who developed curricula for 3-day and 5-day regional Pavement Maintenance, Repair and Inspection (PMRI) seminars.

MSgt. Marshal M. Wakefield, DPP, who kept officer and airman authorizations intact despite manpower reductions and early out programs and for design of computer products which improved productivity, saved money, and enhanced personnel productivity.

MSgt. Timothy G. Drake, Det. 2, who was instrumental in identifying specific guidelines for all repair concepts.

MSgt. Randall A. Honeyman, Det. 2, whose expertise in overall command and control ensured senior NCOs and officers were trained in wartime personnel leadership.

TSgt. James M. Petree, Det. 2, who managed the Explosive Ordnance Disposal (EOD) runway and practical training areas where over 40 ordnance items and seven booby traps are used to provide EOD training, and who established two new booby trap areas, improving already realistic training for over 200 EOD students annually.

TSgt.Donald M. Kramer, DEMG, who assisted AFSC, ATC, and AFLC with the elimination of the San Antonio Real Property Maintenance Activity and the implementation of CEMAS, BEAMS, and WIMS at Brooks, Randolph, Lackland, and Kelly AFBs.

TSgt. Hazel M. O'Brien, SIO, who salvaged the annual $355,000 Center Automated Data Processing Equipment Maintenance Program, spearheading and supervising the total inventory of over 1,500 individual items and saved $50,000 in the contract maintenance program while ensuring superior performance.

TSgt. Robert A. Brown, CEMIRT, who installed a 900KW back-up power system in support of B-1B aircraft hydrant fueling at Dyess AFB, saving the Air Force over $100,000.

SSgt. Ronald J. Bilak, LG, who was a key player in the logistical support of the flawless environmental analysis test conducted by the E&S Laboratory, producing valuable results on the impact of aircraft noise and how it affects the civilian population.

SSgt. David K. May, DPP, acknowledged authority for the Air Force E&S OPR/EPR program, who set up controls and follow-up procedures which have as-

see WINNERS, p. 7

Winners Represent Many AFESC Offices, Other Commands

sured all required OPRs have been made available for Air Force-level board actions with 100 percent on-time submissions for reports submitted to the local personnel office.

SSgt. Donald R. Bush, DEMC, is the predominant element in the success of the Center's HVAC efforts. His ability and desire to assist stand out in HVAC training. His vast technical knowledge and specialized teaching techniques have been invaluable in the HVAC on-site training program.

SSgt. Michael J. Marsden pursued interpretation of regulations regarding expenditure of 3080 funds to the Air Staff level, thereby saving $1.3 million. He provided expert assistance to the YE Technology Transition Office and maintained continuity of the program through the transition from Fiscal Year 1989 to Fiscal Year 1990.

SSgt. Ronald J. Bilak was a key player in the logistical support of the environmental analysis test conducted by the E&S Laboratory. The test was flawless and produced valuable results on the impact of aircraft noise and how it affects the civilian population.

SSgt.David K. May is the acknowledged authority for the Air Force E&S OPR/EPR program. He established systematic controls and follow-up procedures which have assured all required OPRs have been made available for Air Force-level board actions. He has an unsurpassed record of 100 percent on-time submissions for reports submitted to the local personnel office.

SSgt. Donald R. Bush is the predominant element in the success of the Center's HVAC efforts. His ability and desire to assist subordinates stand out in HVAC training. On training visits, he has given up his personal time to assist students having difficulty in HVAC subjects. His vast technical knowledge and specialized teaching techniques have been invaluable in the HVAC on-site training program.

SSgt. Robert G. Lindstrom, DET 2, whose student critiques cite his knowledge, dedication, and communication skills as main reasons why this is the best fire protection training in the Air Force. Sergeant Lindstrom was hand picked to represent Air Force fire protection for an international seminar on collapsed structure rescue. During Officer Field Education (OFE), his expertise was instrumental in ensuring that civil engineering and services officers received critical hands-on training on the P-19B firefighting vehicle and search procedures.

SSgt. Phillip W. Gentry, Det. 2, wrote and instructed the first-ever Pest Management contingency course in the Air Force. This course will provide deployed forces the capability to develop a r(eliable pest control plan anywhere in the world.

SSgt. James A. Collier, OL-I, completely rebuilt two heavily fire-damaged prime-power diesel engines for the Wilford Hall Medical Center and another 500 kilowatt diesel engine supporting the Kirtland AFB Chemical Laser Test Facility in record time at a savings to the Air Force of over $400,000. He eliminated a potential flying safety hazard at Laughlin AFB, Texas while restoring an unreliable airfield lighting system. Sergeant Collier designed, built, and installed an automatic shutdown system for the power generator he had overhauled, eliminating a serious safety hazard and protecting high-value assets.

Sgt. Matthew D. Hauser, SI, was the lead programmer in the development of computer software to manage nearly $300 million of furnishings assets at 36 overseas sites. He developed or supervised development of over 50 new software programs and over 250 program enhancements and managed development of new CONUS dormitory furnishings management software by adapting and converting existing programs from overseas furnishings software and developing new applications necessary to complete the module.

Gary L. Shelrer, SIT, developed and implemented the Center's telecommunications plan, providing the capability to send electronic mail and files. He purchased the 41 WIMS and SIMS systems worth over $7.8 million utilizing year-end funding. Shelrer established the Air Force's priorities for these acquisitions, technical evaluations for each configuration, and purchase limits based upon contractual compliance and MAJCOM monetary inputs.

Thomas F. Lewicki, DEMM, conducted Corrosion Control workshops at four PACAF locations and provided training on corrosion control to engineers from the United Kingdom, which will now be repeated annually because of its initial success. He conducted a tri-service workshop to develop a cathodic protection specifica tion, which is an unprecedented accomplishment.

James G. Murfee, RDCP, successfully developed a new asphalt pavement which will provide wing commanders with durable airfields that can take the repeated beatings of high-pressure aircraft tires. His new asphalt design will be incorporated at bases around the world, saving the Air Force $20 million annually in pavement maintenance costs. He also spearheaded efforts to involve civil engineers in the design of thrust-vectored aircraft and mitigation of their potential damaging blast effects on pavement. Because of Murfee, the design of future aircraft will incorporate ways to avert pavement damage without sacrificing performance.

Douglas C. Downey, RDVW, completed the most extensive and well-documented test of enhanced biodegradation accomplished in the United States. Research results were immediately available to all MAJCOMs through a series of "Technology Update" letters and phone, consultations. Applied at bases such as McChord, Holloman, and Griffis, his work has saved the Air Force at least $10 million by avoiding improper application of biotechnology.

Richard N. Vickers, RDCF, was responsible for the overall direction of 40 exploratory and advanced development research projects, five government project officers, and 50 contractor staff. He contributed exceptional engineering and managerial expertise to such technically complex programs as Fuel Neutralization, Flow-Through Shelter Fire Protection System, and the B-2 Fire Protection System.

As Chief, Engineering Research Division, Joseph L. Walker, RDC, demonstrated mastery of division financial needs and instituted necessary procedures to effectively manage a $7.5 million budget. He initiated and oversaw modernization of equipment and hires of technical personnel while ensuring the division's priority projects were funded during a period of severe budget reductions.

Thomas R. Ove, DEHRD, developed 55 dining facility concept designs for installa tions around the world. He also designed the west coast mortuary facility. Ove's skill and talents have added a new dimension to the management assistance we provide our customers.

Esther G. Green, RDC, is responsible for all administrative functions of the 70-person division. Her outstanding performances are documented and highlighted in the division's clear-cut successes in developing and presenting full-spectrum technical programs to senior Air Force audiences.

As a direct result of Richard L. Jamieson's (DEOX) dedicated effort to ensure that E&S forces are properly identified and supported in the global war plans, our readiness posture is at an all-time high. The computer program he developed to manage the deployment of 28,000 engineers and 5,500 services forces, which accompany Air Force aircraft to several hundred locations, allows instantaneous plan updates. As a result of Jamieson's outstanding efforts, the major commands can now be quickly advised of a deployment plan change so our forces are continuously aware of their wartime taskings.

Robert D. Coleman, DEMC, designed an HVAC training program which provides the quality and in-depth training necessary

See COMMANDER'S, p. 8

Commander's Awards Are For Extraordinary Assistance to Center

to prepare base civil engineering maintenance personnel to analyze, repair, and fine- tune complete HVAC systems that were previously beyond their capa bilities. Thousands of dollars are being saved by Air Force personnel repairing HVAC systems rather than using costly civilian contracts. Coleman developed an advanced HVAC electronic controls training program, receiving outstanding remarks.

Wesley C. Hammond, DEC, was a key in getting Congressional approval to use parametric estimating as an alternative to the 35 percent design cost estimate. His work in developing the Air Force Historical Cost Book and updating the DOD historical cost data base paved the way for the Air Force to show the DOD and Congress that parametric estimating is more accurate than traditional methods.

Edward C. Page, DEC, was the voice of AFESC in the critical planning stages of special activities programs such as the B-2 and Advanced Cruise Missile. He ensured facilities required to support weapon system deployment and operation were programmed correctly and met Initial Operational Capability dates. His recommendations on facility requirements and cost are respected and accepted by program managers, the Army Corps of Engineers, AFSC, HQ USAF, and DOD.

Dr. David R. Burris, RDVW, initiated several programs to facilitate cleanup of contaminated sites by providing a better understanding of how fuels and solvents are transported in soils and ground waters. When confronted with a contamination problem associated with rapid runway repair materials, he developed a unique procedure for studying and predicting the transport of perchloroethylene through soils.

Hugh A. Pike, RDCF, advanced Air Force firefighter training and proficiency through the development of certification standards and the successful introduction of a video-based situation simulator. He was chiefly responsible for the development for the postattack models and their application to determine vulnerability of critical facilities in the operational theaters. These models were successfully used as input into the siting and construction of facilities at Crotone AB, Italy.

Charles J. Carpenter, RDVS, initiated an extremely successful program to determine the feasibility of using sodium sulfide and ferrous sulfate to treat rinse water from electroplating. It has been implemented at Tinker AFB, saving waste treatment costs of $655,000 per year. A patent is being processed with Carpenter as one of four co-inventors. This will be the first patent for the E&S Laboratory.

Andrew D. Poulis, RDXI, developed information transfer methods for the Technical Information Transfer program. Under his direction, the Technical Information Center established a CD-ROM system that contains over 17 databases for researchers and engineers worldwide to access for information.

Maurice E. Hoffman, DEHFQ, was the key figure in advocating efforts to enhance Air Force Food Service operations. His hands-on approach to providing quality food products for our airmen was the key to his success. He has been our ace fact finder and analyst on ration technology. He spearheaded and chaired the committee to improve the Air Force worldwide menu -- a key quality of life program.

Ronald P. Cloutier, DEMC, was the key in creating, developing, and administering the HVAC training and pre-acceptance programs. His skills and knowledge in analyzing and repairing HVAC systems and his ability to communicate enabled him to be a superior instructor.

Larry L. Testerman, RDXI, acted as writer/editor on two Air Force publications. He helped write, edit, and produce the Technology Area Plan, worth over $17 million to the Center. He redesigned covers for technical reports to provide both perfect binding and a distinctive illustrated cover for each division. Testerman spearheaded a project to provide HQ AFSC/XT clean text and quality pictures to help inform congressmen, taxpayers, and other interested parties of what our laboratory dollars are being spent for.

Peggye H. Armstrong, RD, was responsible for all administrative functions of the 120-member E&S Laboratory, the largest directorate in AFESC. This outstanding support involved complex documentation, intricate coordination of busy schedules and TDYs, critical suspenses, and supervision of other administrative personnel. She skillfully coordinated the daily tasks of RD personnel to accommodate the many no-notice projects which developed as a result of the 1989 E&S Worldwide Conference.

As a legal secretary, Marilyn S. Stout, DEMGR, excelled in preparing over 100 pages of legal documents relating to utility rate intervention cases and produced an error-free 40-page document entitled Study of the Laws of Co-generation for Air Force-wide distribution. In addition she accepted full-time responsibilities as secretary for the newly established resource management branch and has served as travel agent, budget and accounting officer, scheduler, editor, receptionist, librarian, and conference organizer to support the project officer.

Pamela W. Yohn, DEOT, was a key member of the Readiness Training Team. She applied her excellent working knowledge of office systems to produce top-quality results. She understood very complex Air Staff, MAJCOM, and base-level issues and helped division personnel to project the right intent when corresponding with these various levels.

Ethel D. Alexander, SIO, was instrumental in the 9700 area computer system beddown. She pioneered the new and extremely complex menu system. The remote system upload provided the basis for the Center's implementation of the new office automation and menu driven software. She aggressively pursued the test and evaluation of innovative new software products and was directly responsible for the acquisition of Word Processing Plus.

Michael D. Ates, DEMP, revitalized the BAK-9 maintenance program using the revolutionary approach of CEMIRT involvement in lieu of contracting, saving over $32,000 per system. As representative to NATO and ICAO standardization committees, he assisted in establishing international policy for aircraft arresting systems and airfield marking.

Bradley B. Bates, DEHM, provided professional mortuary services throughout the year to Air Force mortuary officers seeking guidance during all hours of the day or night. He especially excelled in his compassionate handling of family members of deceased Air Force personnel. He has eagerly augmented the Clark AB mortuary staff and physically assisted in the relocation of the West Coast Port Mortuary from Oakland to Travis AFB.

Wade H. Grimm, YEE, was the first person hired in YEE and was in the unenviable position of single-handedly carrying the responsibilities of the E&S Systems Division for a period of 3 months. As new personnel were brought into YEE, Grimm transferred files to the newly assigned programs managers, briefed them on the program, and ensured that the necessary points of contact were established to facilitate a smooth transition.

Mary E. Reynolds, RDXI, reorganized and revised the Summer Faculty Program for maximum efficiency in serving the Laboratory and the individuals involved. She provided short-notice typing and proofreading support for reconstructed Society of American Military Engineer magazine articles to provide high-quality text and pictures to HQ AF/LEE. Reynolds proofread copy for three editions of UPDATE and assisted the editor in merging material for the typesetter.

Linda J. Allen, DEC, wrote draft statements of work and evaluated contractor proposals. She saved project officers hundreds of hours of work by preparing answers to letters from contracting and contractors before the package was passed on the the project officer. Allen kept the directorate management information system current by updating IOIs, TDY

See HONOREES, p. 9

Honorees Represent Dedication and Expertise

and contract tracking files, and managing the AFESC Initiatives System for the directorate.

Jean S. Krance, DEMM, organized all activities for the 1989 MAJCOM O&M Directors Conference to include making hotel, meeting room, and equipment arrangements in San Antonio. She took minutes at the MAJCOM HVAC Meeting in Atlanta GA and the Tri-Service Cathodic Protection Meeting at Tyndall AFB and had them transcribed and published in less than a week. Krance formatted a 20-Year Roofing Warranty that has since been published as the Air Force standard.

Janilyn R. Jones, RDCP, excelled at crisis response. When RDX had to assemble several briefing books and packages for a Spring Review conducted by HQ AFSC/XT, she volunteered to help with copying, collating, assembling and binding the three most important books, helping to make the briefing a success. Jones has given her own time to meet short suspenses for numerous projects and has quickly learned the most updated computer programs so that she can help create professional drawings and viewgraphs.

Through her own initiative, Bonnie M. Castillo, RDV, became the division expert on visual aids preparation. She produced over 1000 outstanding quality viewgraphs for various briefings. Her outstanding preparation and assembly of specially formatted technical documentation received accolades from HQ AFSC/XTH during review of the E&S Laboratory's research program.

Dawn D. Daniel, SIW, collected, organized, and developed briefing presenta tions for the various SI meetings. She developed numerous programs which fixed existing problems with present Wang reports. Daniel was a self-taught graphics expert and has provided graphics support for numerous briefings.

Kenneth L. Williams, SIO, designed, developed, and implemented the AFESC Wang menu conventions. He improved the variable file concept by incorporating an accurate count option and data record synchronization between systems. Williams designed and implemented the 3270 network tying the CYBER and AFESC Wang systems together electronically.

As USAF Hennessy Trophy Awards administration coordinator, Eva M. Cutchen, DEHF, formatted and finalized the USAF and National Restaurant Association Memorandum of Understanding which was signed on behalf of the Air Force by AF/CV. She also developed and monitored the Hennessy Awards Plan of Action Milestone System for all key action officers. Cutchen provided outstanding and timely support for the HQ USAF/LEE-hosted tour and formal dinner for the National Restaurant Association Board of Directors.

As the Procuring Contracting Officer for the YE System Integration Support contract, Capt. Jerry G. Gable, AFSC MSD/PKR, developed rapid, simple procedures for adding and deleting contract tasks. He provided expert advice on raising the contract manpower ceiling and expedited coordination of contract documents through to the Air Staff. Capt. Gable provided outstanding support to Center personnel throughout 1989.

TSgt. Debra J. Cooper, ADWC/CCPC, provided outstanding support during 11 events involv ing more than 300 E&S personnel at the Tyndall AFB Conference Center. She provided invaluable administrative assistance to the conferees in utilizing telecommunications and computer equipment. Sergeant Cooper's professional audio/visual and graphics support enabled the conferences to run smoothly and allowed attendees to focus on their primary tasks.

Larry G. Edwards, ADWC/LGCX, was instrumental in the successful source selection for the fiberglass mat training system. As Chief of the Source Selection Evaluation Team, he ensured that the source selection remained on schedule. His efforts to analyze cost and pricing information and assess the financial position of the offerors went beyond the normal support requirements.

Sue C. Harris's (ADWC/LGCX) support of the fiberglass mat training system source selection was crucial to its success. As the buyer and a Source Selection Evaluation Team member, her diligence and attention to detail made everyone's job easier.

Vera Heath, 325 MSSQ/MSSC, assisted the Center by efficiently and expeditiously filling over 25 civilian positions. In one instance, she provided one of our divisions with an engineer within 6 hours. She has always put forth the extra effort to understand research requirements in order to provide applicants with unique qualifications.

Ann N. Sweat, ADWC/CCPC, provided outstanding service to the entire AFESC community for 11 events for more than 300 E&S personnel at the Tyndall AFB Conference Center. Whether it was long-range planning for a 70-person conference such as the E&S Worldwide Conference or a short-notice request for a 30-person morning meeting such as Operation Relook, Sweat was always ready to serve. The Conference Center is an excellent meeting location due to her constant attention to customer care.

Janet L. Davis, IPA, demonstrated outstanding competency by completing bibliographic studies for a sonic boom research collection, rapid runway repair, hazardous waste minimization, and geotechnical centrifuge. Her ability to expertly use precise search strategies and Boolean logic to elicit specific information from databases to specific user requests was exceptional.

Services Award Winners

(from p. 1)

(Capt. Kimberly K. Toney, 4960th Air Base Squadron, Arnold AFB, Tenn).

Outstanding Services Military Superintendent of the Year -- MSgt. Azucena R. Anteola, 3700th Services Squadron, Lackland AFB, Texas (SMSgt. Freddie L. Scott, 15th Services Squadron, Hickam AFB, Hawaii).

Outstanding Services Military Technician of the Year -- SSgt. Priscilla A. Jackson, 437th Services Squadron, Charleston AFB, S.C. (SrA. Sharon Young, 15th Services Squadron, Hickam AFB, Hawaii).

Outstanding Services Senior Civilian Manager of the Year -- Marshall A. Blair, 60th Services Squadron, Travis AFB, Calif. (William A. Owensby, 3rd Services Squadron, Clark AB, Republic of the Philippines).

Outstanding Services Civilian Manager of the Year -- Richard E. Burnham, 21st Services Squadron, Elmendorf AFB, Alaska (Frank S. Murphy, 554th Services Squadron, Nellis AFB, Nev.).

Outstanding Services Civilian Supervisor of the Year -- Darrell Z. Wingo, 4960th Air Base Squadron, Arnold AFB, Tenn. (Genevieve G. Kantorowski, 15th Services Squadron, Hickam AFB, Hawaii).

Outstanding Services Civilian Technician of the Year -- Charles C. Houser, 48th Services Squadron, RAF Lakenheath, United Kingdom (Pamela J. Garner, Det 78, San Vito Air Station, Italy).

Outstanding Services Unit of the Year (Large) -- 3700th Services Squadron, Lackland AFB, Texas (3201st Services Squadron, Eglin AFB, Fla.).

Outstanding Services Unit of the Year (Small) -- 7th Services Squadron, Carswell AFB, Texas (12th Services Squadron, Randolph AFB, Texas).

Awards will be presented at the Worldwide Housing and Services Conference at Tyndall AFB, Fla.,the week of June 25-29.

At Sheppard TTC

3770th TTG Puts New Heating Course On-Line

by TSgt. Robert D. Dunn
and
Maj. Steven J. Barlow

The 3770th Technical Training Group's Mechanical Division, at Sheppard Technical Training Center, Sheppard AFB, Texas, has expanded its formal training program to include the fourth in-residence advanced course for heating technicians developed and implemented since 1987.

The newest course (Hot Water Heating Systems) is the last of four courses developed in response to the June, 1985, utilization and training workshop (U&TW) for the Heating Systems Specialist (545X2) career field. The course was brought on line in January.

The U&TW identified several problems with the old 45-day primary advanced heating course, in three major areas:

·Advanced training was needed by 5- and 7-level heating technicians in specific areas not covered:

·Costs were too high and continually rising, and the course was already too broad in scope, even though training in additional areas was needed.

·Training on troubleshooting heating equipment control systems was fast becoming essential for advanced heating technicians.

Additionally, it was determined that heating system technicians across the board needed specialized training on the larger, sophisticated commercial and industrial heating systems they encounter in the field, especially since only half the technicians in the field receive formal 3-level training.

Rising TDY and per diem costs significantly reduced the number of students who attended the old advanced course. Furthermore, local CE units simply could not afford to lose some of their most qualified technicians for almost 2 months.

Finally, the "all-inclusive" scope of the 45-day course was so broad that a lot of the material covered didn't apply to many of the students because their home bases did not have the variety of heating systems covered in the course.

The solution agreed to at the U&TW was to expand the formal technical training available to advanced heating specialists by combining the new advanced training requirements with the relevant material from the 45-day course and then break the material up into four separate shorter courses.

Thus the 45-day course was discontinued and the 3770th Technical Training Group's Mechanical Division embarked on a multi-year effort to develop and/or revise and implement new, specialized, shorter courses.

The newest course is a result of that development.

It is designed for specialists, technicians, and managers responsible for the operation, maintenance, and repair of low temperature, medium temperature, and high temperature hot water heating systems. It contains specific information on construction features and operating principles of system components as well as extensive hands-on training in operations, troubleshooting and repair.

Students will be required to use precision measuring instruments to analyze system conditions and to locate realistic problems within a functional hot water heating system.

They will learn:

·How to adjust fuel flow and pressure as well as air flow on high/low/off and modulating type positioning combustion control systems.

·How to isolate and repair electrical problems using multimeters and wiring diagrams.

·Proper response procedures during emergency conditions such as low flow problems and furnace explosions; and

·Heat efficiency and combustion analysis.

The new course is patterned towards practical training and provides heating personnel an opportunity to improve their analytical skills and problem solving abilities.

The 3770th Technical Training Group continues to strive to provide Civil Engineering units with top-quality training. Refer to AFR 50-5 for more information on the other training courses available to CE mechanical technicians; contact your MAJCOM education and training OPR; or call the 3700th TCHTW Mechanical Training Manager at AV 736-2950.

Courses Developed from the U&TW

The first course developed as a result of the Utilization and Training Workshop appeared in April, 1987. It was the Mechanical Systems Water Treatment course, which was significantly revised and made available in April.

Other course development milestones:

·June, 1987 -- Apprentice Heating Systems Specialist course brought on-line.

·July, 1987 -- Steam Heating Systems course implemented.

·June, 1988 -- Coal Handling Mobile Training Team (MTT) course implemented.

·January, 1990 -- New 10-day Hot Water Heating Systems course first offered.

AF Museum Honors Vietnam-Era Engineers

A new exhibit honoring the Southeast Asia combat work of Air Force Engineering and Services personnel has opened at the U.S. Air Force Museum, Wright-Patterson AFB, Ohio.

Built around a Republic F-105 "Thunderchief," the permanent life-size diorama includes appropriately dressed mannequins building a revetment, rescuing a pilot, and working in kitchen and billeting tents.

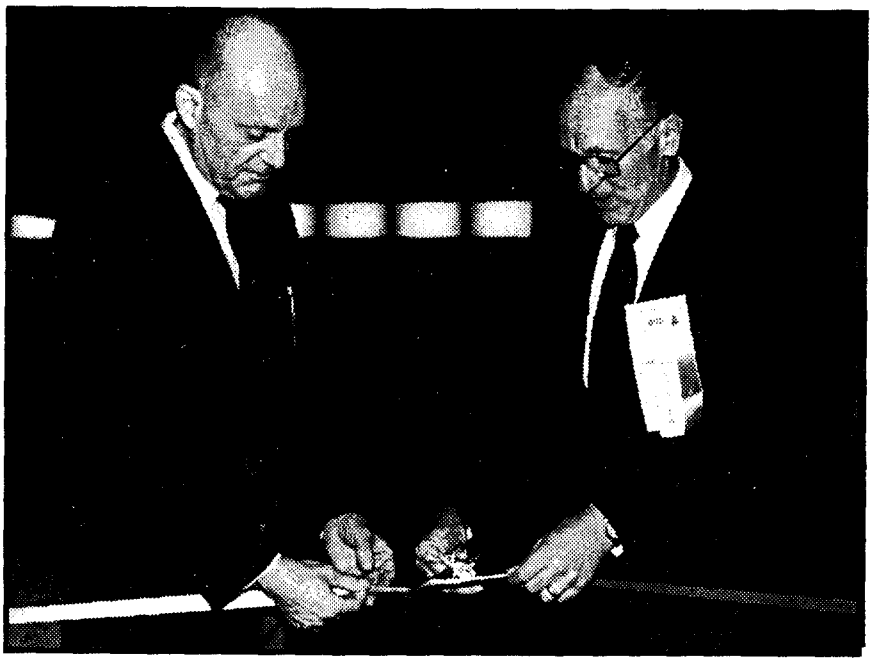
A mini-theater with a corrugated metal roof features a videotape on "Project Turkey," the building of Tuy Hoa Air Base in South Vietnam. That 1966 project marked the first time the Air Force had complete responsibility for building one of its own combat air bases. Using a unique single-package concept, Air Force engineers transformed a stretch of sandy South China Sea shore into an operational air base in less than six months.

A wall display uses photographs and words to portray the work of airmen assigned to civil engineering and services units throughout Southeast Asia.

Carries Vietnam Theme

The exhibit has a Vietnam War-era theme because the mid-1960s were a turning point for engineering and services. Through the Prime BEEF and RED HORSE concepts, engineers again gained the mobile warfighting capability they'd had in World War II. These concepts were also adopted by the Services community for Prime RIBS.

The exhibit was opened during the national meeting of the Society of American Military Engineers. Maj. Gen. Joseph A. Ahearn, director of Air Force Engineering and Services, and Museum Director Richard L. Uppstrom cut the traditional ribbon.



Maj. Gen. Joseph "Bud" Ahearn (right) cut a ribbon to open the Civil Engineering and Services Exhibit at the U.S. Air Force Museum. Museum Director Richard L. Uppstrom assisted.

Official U.S. Air Force Photo

General Ahearn said the exhibit recognizes all Engineering and Services personnel who served in Southeast Asia and conveys the E&S role as a critical part of the Air Force mission.

Involved in the project's inception were Maj. Gen. (ret.) Clifton D. Wright Jr., former Engineering and Services director, and Col. Marshall W. Nay Jr., former dean of the AFIT school of Civil Engineering and Services and recently chosen to be HQ AFESC commander.

Dr. Ronald B. Hartzer, E&S historian, wrote the display narrative, provided photographs, oversaw videotape production, and helped ensure the exhibit's historical accuracy. Capt. Mary Kay Eisert, AFIT project officer, coordinated the effort with Museum personnel.

Several engineering and services squadrons and other sources helped locate and ship exhibit material to the Museum. For example, revetment materials, tents, immersion heater and burner units came from AFESC. The AM-2 aluminum matting on which the F-105G rests came from Davis-Monthan AFB, Ariz., and Warner-Robins Air Logistics Center, Ga.

Members of the 2750th Civil Engineering Squadron at Wright-Patterson AFB laid the matting, built the revetment and a boardwalk through the exhibit, and hardbacked the tents.

The new exhibit is in the Museum's Modern Flight Gallery, home to more than 50 aircraft. More than 200 U.S. and foreign aircraft are displayed at the Museum.

Display items are still needed for the billeting tent. Donations of personal items from the Vietnam War era would be appreciated. If you have a donation, send a description of it to "U. S. Air Force Museum/DRC, Wright-Patterson AFB, Ohio, 45433-6518."

More Training Needed

Study JustifiesWIMS Use by Base-Level Units

by Maj. John Dieltz
AFMPMET/CC

The Air Force Management Engineering Agency recently completed a study of WIMS impact on base-level Civil Engineering units. The study was undertaken at the request of the ESIMS executive committee and done in cooperation with the Air Force Engineering and Services Center.

The objective was to study, analyze, and report on the impact of WIMS. This involved quantifying the benefits of WIMS and making recommendations for consideration for future policy decisions on funding, manpower, and organization.

AFESC staff assisted the AFMEA study team throughout the study. They helped develop the questionnaires sent to 13 bases and accompanied the study team when it visited four bases. An AFESC person sat with an AFMEA team member during each on-site interview. The AFESC representatives helped "tune" the system at the bases and answered many technical questions base operators had. Every WIMS system was working more efficiently and, in some cases, with new unique applications when the team left.

Findings

The team found that WIMS has improved productivity, customer service, and mission support. The precise benefits varied by work center and base, but overall every squadron has seen all three areas improve through the use of WIMS.

The team also found some areas could be improved to gain even more benefits. One of these areas is training. Nearly everyone who responded to the questionnaires or was interviewed by the study team wants more training. Specific desires varied greatly from work center to work center and from base to base, depending on the current training levels. Industry experience has also shown that user and organization benefits increase with increased training.

Training needs cover the entire spectrum from SSA conducted orientation training to on-the-job training in the work center. Every squadron will benefit from a healthy continuation training program geared to a variety of users. Some only want instruction on new software releases while others need training on Wang utilities like VSGF, 2020, REPORT, or DATENTRY.

Conclusion

The WIMS decentralized software development concept has been successful because the users have a direct and immediate impact on the applications they enhance or develop. The software has continually evolved and it will continue to improve because the users continuously infuse new and better ideas.

WIMS has made the IE a key player in the squadron and the software makes all work centers more interdependent and eliminates duplication of effort. Through changes of access rights, squadrons can change processes or work responsibilities with ease. WIMS is an excellent system and civil engineering's only force multiplier. The benefits of supporting the system, further training, and continued software development outweigh the costs.

The ESIMS Executive Committee approved the report, which is being distributed worldwide. The WIMS Study Report contains many comments and recommendations; review your squadron's copy for your work center's specific recommendations.

SPACECOM Remote Sites Get Computer Programs For Their Civil Engineers

(From p. 5)

Onizuka AFB, Calif., had already developed some major civil engineering applications using it. MSgt. Francis at Eldorado AFS, Texas, MSgt. Perlick at HQ AFSPACECOM, and SSgt. Becker at Onizuka AFB, Calif., continued developing application software, testing it as development progressed.

Finally, in April, 1990, the programs were ready and Space Command sites were sent Wang personal computers and the following civil engineering applications programs:

Work Orders (AF Form 332 and AF Form 327 look alikes);

Job Orders (AF Form 1879 look alike);

Recurring Work Program;

CECORS;

Collection Work Order Number Listing;

Material Control Forms (DD Form 1348-6 and AF Form 2005 look alikes);

Bench Stock Accountability;

Supply Turn-Ins;

Panels (a command-unique program to track all the electrical panels and associated equipment at the sites).

Funds, budget, contract programming, and labor accounting programs are also being reviewed.

For more information about Space Command's civil engineering site automation program, call MSgt. Marie Perlick, HQ AFSPACECOM/DEOI, at AV 692-9954 or commercial (719) 554-9954.

HQ AFESC, Israel to Cooperate in Blast Tests

by
Capt. Richard Reid
and
SMSgt. Carl Hollopeter

The U. S. Air Force Engineering and Services Center (AFESC) and the Israeli Air Force are conducting a full scale blast test in Israel on a reinforced earth munitions storage bunker. If successful, this protective construction design concept could provide a rapid and inexpensive approach to protective shelters for both bare bases and main operating bases.

Adding reinforcement to earthen materials is a centuries-old concept. In biblical times, straw was added to the mud used in making bricks to decrease cracking and increase the strength of the bricks. A related concept is now widely used by civil engineers in the U.S., especially in the construction of highway retaining walls.

Simple Construction

In this test the construction process is beautifully simple. A layer of facing panels is laid out at the wall location. Soil is compacted behind the panel to the level where reinforcement is connected to the wall panel. This reinforcement is laid out behind the panel, connected to the panel and buried with compacted soil. After completion of the first layer of panels, a second course of panels is added and the process is repeated. Within days, large sections of wall can be constructed.

In the test structure, this process is used to build a three-sided, horseshoe-shaped building, topped by a reinforced concrete roof able to support a protective soil layer. The construction process is unchanged, regardless of the type of reinforcement one chooses.

Two reinforcement materials are generally used - - aluminum strips or synthetic geotextiles. The aluminum strips are approximately 1/4-inch thick, 2-inch-wide strips bolted to the rear of the concrete facing panels. Usually four strips are placed on each panel, two upper strips and two lower. This is the reinforcement used in the Israeli test. Because of the desert environment of the area, this type of reinforcement is well suited for this application. However in areas where the metal strips may corrode, geotextiles are used.

Geotextiles are synthetic grid-like materials delivered in rolls. Typically there is only one layer of reinforcement per panel, as opposed to two layers of metal strips. The reinforcing material is connected to the panels and rolled out behind the wall before a new soil layer is added. This method of reinforcement is one the AFESC will be examining in future research.

Seven Blasts Planned

Once the test structure is built, a series of seven blast tests will be conducted on it. The two variables in each blast will be the amount of explosive and the location of the blast. Many of the blasts will take place in the soil backfill behind the wall. During each test, AFESC instrumentation personnel will measure the strain in the reinforcement, structural acceleration, soil interface pressures, and free field pressures. Detailed video documentation using a high speed camera will also record the events. These data will help in development of design methodologies for a given level of threat, as well as develop an understanding of how blast waves are transmitted through this unique system.

If successful, this test will demonstrate the capability of a long sought after protective construction technique that will provide an alternative to reinforced concrete.

Concrete has Drawbacks

Current protective structures are made of reinforced concrete. Concrete structures often take years to build, are expensive, require large quantities of quality construction materials, and are skilled-labor-intensive. Because of these drawbacks, reinforced concrete is ill-suited for use in force projection or bare base applications.

Reinforced earth construction uses the indigenous earth as the primary construction material, uses labor skills that already exist in all four services' civil engineering workforces, requires little equipment and minimizes airlift support. Not only is it faster; it is projected to be 30 per cent cheaper than current methods.

The Air Force involvement in this test will provide a chance to evaluate this technology and arrive at a "go or no go" decision for further development of this new methodology. Future articles in UPDATE will keep you informed of our progress.

Pavements Schedule:

The Pavements Branch runway testing schedule has been set for June. It includes:

Non-destructive testing: McChord AFB, Wash. and Mountain Home AFB, Idaho, July 23-Aug. 10.

Destructive testing: six Korean highway strips, June 1-29.

Friction characteristics testing: Castle, Beale and Vandenberg AFBs, Calif., through June 5; Elmendorf, Eielson, and Galena AFBs, Alaska, July 16-Aug. 3.

For more information call Maj. Edward L. Miller, HQ AFESC/DEMP, AV 523-6330.

Joy Dearing, 16-Year HQ AFESC Employee, to Retire

One of the first people hired by the Air Force Civil Engineering Center when it moved to Tyndall AFB, Fla., in July, 1972, will retire June 29 after 30 years' continuous service.

Ms Joy Dearing, protocol officer and secretary to Col. George T. Murphy, vice commander, HQ AFESC, was one of the first two people hired locally by the Center.

"Joy is an important contributor to our Center," said Colonel Murphy. "We all benefit from and admire her dedication and tireless energy."

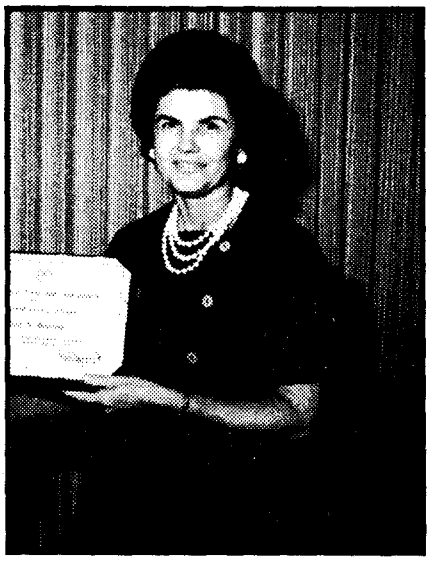
She has worked for the Center's leadership, and in Operations and Maintenance for most of her 16-year tenure at HQ AFESC. Since 1972, she has worked all but 2 years with AFESC, spending that time with the base-level organization.

She was reemployed by Col, Earl Cole, then the Center's director, Operations and Maintenance, and worked for Col. George Tate after that. With the retirement of Colonel Tate, and Sam Carter, deputy director of DEM, she moved into the Command section as secretary to Bernard Meredith, a member of the Senior Executive Service, who until his retirement was technical director for the Center commander.

When Mary Gregory, Center protocol officer, retired, Dearing assumed her duties with those of the vice commander's secretary.

One of her former bosses is Col. Henry C. Hank) Aulwurm, now deputy chief of staff, Engineering and Services, HQ Alaskan Air Command. He said, "Joy made everyone's job easier. She accomplished an amazing amount of work, and while she made the protocol responsibilities seem easy, it was because she worked hard to make things right."

She was also secretary to Col. Roy G. Kennington, HQ AFESC commander, when he was vice



commander. He said, "Joy made a significant contribution to the success of our Engineering and Services Worldwide Conference, when it moved here from Homestead AFB, Fla., 3 years ago. Whether it was a full-scale conference, or a visit by an individual general officer or a congressional staffer, she gave each event a productive sendoff. She has contributed a great deal of herself to making our job easier."

Ms Dearing started her civil service career at Lackland AFB, Texas, and moved with her family to Bay County. She has lived in the Southport/Deerpoint area since then, and will continue to make her home there.

907th CES Commander is Killed In Kentucky Plane Crash

RICKENBACKER ANGB, Ohio -- The commander of the 907th Civil Engineering Squadron, Lt. Col. Larry L. Dock, died May 21 when a chartered aircraft in which he was a passenger crashed on takeoff at Frankfurt, Ky.

Colonel Dock, of Parkersburg, W.Va., was killed with five others when the six-seat Cherokee Piper Lance crashed and burned seconds after taking off from Capital City Airport in Frankfort. Colonel Dock was en route to Owensboro, Ky., where his civilian employer, the engineering firm of Burgess and Niple, is designing a bridge to cross the Ohio River.

He was slated to take over the company's Kentucky and Cincinnati office in Crestview Hills, Ky.

Colonel Dock had been the commander of the 907th CES since September, 1983, and had held the rank of lieutenant colonel since June 1, 1984. His decorations include the Air Force Achievement Medal, the National Defense Service Medal, Armed Forces Reserve Medal with hourglass device, Air Force Longevity Service Medal, Air Force Outstanding Unit Award, Air Force Overseas Service Ribbon, Air Force Training Ribbon, Small Arms Expert Ribbon and Republic of Vietnam Gallantry Cross with Palm.

He is survived by his wife, Barbara; a son, Thomas, 25; and a daughter, Julie, 23.

A memorial service was scheduled at 8 a.m. Friday, June 8, at Rickenbacker Air National Guard Base.

Setting the Record Straight:

The Air Force's Position on Key Roofing Issues

by Julian Ius
HQ AFESC/DEMM

Alarmed at the cost of building and repairing built-up roofs, the Air Force studied the problem in the 1970s. The study confirmed the worst suspicions -- built-up roofs were failing in five to seven years and we were replacing them in 10 to 12 years.

But we were buying 20-year roofs.

The study showed we were getting poor installations and we weren't properly maintaining our roofs.

The Air Force declared war on leaky roofs.

The first move was to begin a roof management program to reduce the life-cycle cost of roofs. We began improving the quality of our roofing installations and giving our people the tools and motivation to maintain the roofs.

AFM 91-36, *Built-Up Roof Management Program* (September, 1980), dealt with roofing management, repair-vs.-reroof decisions, repair procedures, and how to get what we were contracting for. Except for two chapters -- Five and Six -- the manual left civilian roofing contractors yawning.

Contractors Pay Attention

Chapters Five and Six, however, addressed how to get what we were paying for (including tight specifications) and how to determine roof construction acceptance. Acceptance included taking contractors' samples daily and comparing a lab analysis with parameters in the manual. Actions suggested by the manual included replacement of the entire day's work or extension of the 5-year contractor performance agreement to 10 years.

Some roofing contractors stopped bidding on Air Force contracts, saying the new specifications were too strict. Reports becan coming in of cost increases per square for re-roof construction.

But we *did* get better roof construction because of the daily samples, and where construction was poor we could document a bad installation.

AFM 91-36 Shakes 'Em Up

What AFM 91-36 really did, however, was shake a compacent roofing industry into action.

Since AFM 91-36 was published, the Roofing Industry Education Institute has been organized and several associations have started training programs. Associations have also followed the Air Force lead in publishing standard construction details, and the National Roofing Contractors Association published a document titled, "Quality Control in the Application of Built-Up Roof Construction" -- a first, and clearly designed to counter and clarify some Air Force positions.

After negotiations with roofing industry representatives the Air Force has also revised some of its demands. Among them:

•No lab analysis of roofing samples is required (samples only documented bad practices; they didn't improve the construction process, which should be the objective);

•The contractor's job foreman is responsible for quality control, since no one on the job has more influence over the process;

•Quality assurance is the building owner's responsibility. A government inspector must audit the contractor's quality control.

Specifications Change Too

Some specification changes worthy of note are:

•No more charted temperature recorders required on the kettle and no more chalking of felts;

•No more daily graveling-in;

•We use much-stronger fiberglass felts almost exclusively;

•A minimum slope of 1/4 inch per foot is required for all new and re-roof construction whenever physically and economically feasible.

We found that our people weren't irresponsible; instead, we hadn't given them the knowledge, tools and man-hours for roof inspections and maintenance.

We now offer two roofing courses: hands-on training at Sheppard AFB, TExas, that teaches maintenance inspection and repair techniques; and an academic course at Wright-Patterson AFB, Ohio, which teaches how to design a roofing system and how to inspect roofing construction.

Each base must have a roofing engineer and a roofing technician to manage the Base Roof Management Program. We insist that a roofing database be established including all low-slope roofs (less than 3 inches per foot). Each low-slope roof must be inspected annually.

More Changes On the Way

We're looking at ways to pass roof maintenance to the private sector. We're also looking at "rent-a-roof" and "cradle to grave roof management" concepts.

In many respects the Air Force has served as the roofing industry's conscience for 15 years. We feel that the industry is now improving roofing quality through design, material and installation improvements.

Since we finance the process, we intend to keep the pressure on industry to address our concerns to our satisfaction.

Operations & Maintenance UPDATE

New Product /Process Fact Sheets

A few years ago, AFESC/DEMP began providing fact sheets on new products/processes used in design, construction and maintenance of pavements. Research and product testing is accomplished by the Waterways Experiment Station in Vicksburg MS. The final report shows what the product is used for, limitations, guidelines, and points of contact. To date, data on over 110 items have been sent to the major commands, including 21 this fiscal year. Call your major command pavements engineer for more information. *

New Publications

Recently Published:

AFM 88-6, Chapter 3, Change 1 - *Rigid Pavements for Airfields*

AFR 93-5 - *Airfield Condition Survey Program*

AFR 93-13 - *Airfield Pavement Evaluation Program*

AFM 88-5, Chapter 3 - *Drainage and Erosion Control for Airfields and Heliports*

AFM 88-6, Chapter 2, Section A - *Flexible Pavement Design for Airfields, Elastic Layer Method*

AFM 88-24, Chapter 2 - *Flexible Airfield Pavement Evaluation*

AFM 88-24, Chapter 3 - *Rigid Airfield Pavement Evaluation*

AFM 91-44 - *Railroad Maintenance Standards*

AFP 88-71 - *Army and Air Force Airfields, Pavements, Railroads, Storm Drainage, and Earthwork*

AFR 85-8 - *Maintenance and Repair of Surface Areas*

Under Revision:

AFR 55-42 - *Management and Use of Aircraft Arresting Systems*

AFM 88-5, Chapter 2 - *Drainage and Erosion Control - Subsurface Drainage*

AFM 88-6, Chapter 2 - *Flexible Pavement Design for Airfields*

AFM 88-6, Chapter 7 - *Standard Practices for Sealing Joints and Cracks in Airfield Pavements*

AFM 88-7, Chapter 4 - *Soil Stabilization*

*James L. Greene, AV 523-6334

E&S Tech Schools Seek Instructors

We have a critical need for our best NCOs, sergeant through technical sergeant, to fill instructor positions at our tech training schools. We are specifically looking for overseas returnees to volunteer for these positions. Persons volunteering and already matched for an assignment will also be considered for instructor duty. Some benefits of this duty are: a four-year controlled tour, good promotion potential because of the opportunity to learn the AFSC inside and out, and the ability to influence the future of engineering and services. Request commanders' and supervisors' support in soliciting volunteers.

Capt. Gary Hein, AV 523-6398

Some Tech Training Classes Canceled

Due to a shortage of instructors, several classes for courses J3AZR55070 000, Contract Construction Inspector, and J3AZR55370 000, Engineering Assistant Technician, are being canceled and consolidated. This will affect personnel scheduled to attend classes between July and September 1990. Training managers should work closely with their MAJCOM/DP personnel to reschedule or realign their "bogey" to prevent its loss. A message is being sent to all MAJCOMS with detailed information.*

No More SEI 028 in AFR 39-1

Effective in April, 1990, the SEI 028 has been deleted and this change will appear in the October update to AFR 39-1, *Airman Classification.* This SEI was originally created to identify civil engineering personnel with electronics training and experience. Due to changes in technology, it has now become necessary to add electronics training to all 54XXX AFSCs. In November, 1989, a letter was sent to all MAJCOMS requesting their comments; all agreed that SEI 028 should be deleted.

*SMSgt. Ernest Via, AV 523-6380

Pest Management Amendment Approved

HQ USAF/LEE and HQ USAF/PRM approved the amended Pest Management AFMS 4493 for implementation. The amended AFMS, with additives, validates 472 requirements, a slight (+9) increase over the old AFMS. The Air Staff also approved the

Energy Management and Control System (EMCS) Operations AFMS 4467 for implementation. Initial application of the EMCS AFMS indicated no impact on funded authorizations and +12% (+44) impact on requirements. We continue to work with the manpower community to resolve the Operation Relook AFMSs: Pavements and Equipment Operations, Real Estate, Water and Waste, Plumbing and Financial Management.

Andy Jackson, AV 523-6379

Industrial Engineering Workshop

The workshop, cohosted by HQ AFSPACECOM and HQ AFESC, was held April 3-4 in Colorado Springs. It focused on revitalizing industrial engineering by "meeting the challenges of the changing environment." The minutes should be in distribution to the MAJCOMs by the time you read this. One recommendation of the workshop has already been implemented. An Industrial Engineering Crossfeed Bulletin Board is now on the ESCSIX computer at HQ AFESC. A message has been sent out with instructions on how to use.

Walt McDaniel, AV 523-6394

America the Beautiful

by Wayne Fordham
Directorate of Operations and Maintenance
HQ AFESC/DEMM

President Bush has proposed a massive national tree planting initiative. Included in the President's FY 1991 budget proposal to Congress, this initiative calls, in part, for the planting of one billion trees per year in urban and rural areas. We may want to increase our efforts with tree planting on Air Force bases.

Here is some background on the President's proposal, titled, "America the Beautiful." Trees provide tangible economic, social, and evironmental benefits to society. They enhance wildlife habitat, air, and water quality; they also reduce soil erosion, increase property values, and provide wood products and jobs to strengthen local economies.

Tree planting also provides an interim approach to reducing atmospheric carbon dioxide until more is understood about the relationship between atmospheric gases and the global climate. Trees are especially effective in cleaning the air and conserving energy in communities. Trees provide cooling shade that can significantly reduce energy demands (cities are often much hotter than rural areas due to the vast expanses of concrete and asphalt), and can also act as buffers against cold winter winds.

Scientists have documented increases in certain atmospheric gases since the mid-1800's. These gases are known to help retain heat in the atmoshpere. One of these gases is carbon dioxide. Research is now striving to accurately predict what effect the accumulation of these gases may have on the global climate. Some scientists have speculated that a significant rise in the earth's temperature may result.

Plants: Nature's "Air Cleaners"

Meanwhile, we know for a fact that trees and plants remove carbon dioxide from the atmosphere and release oxygen as a by-product. They are nature's "air cleaners". Planting trees and plants improves air quality, along with the many other benefits, and makes economic and environmental sense, whatever the findings about global climate change.

The President's initiative calls for planting, maintaining, and improving one billion trees per year over the next several years. Thirty million would be planted in some 40,000 communities across the nation. The balance would be devoted to rural areas.

The initiative provides an opportunity for significant private sector involvement. Private sector nurseries are seen as the primary supplier for the landscape-sized material needed for the urban and community component of the initiative. The rural component will draw on many sources, including state, forest industry, and private nurseries.

Planting trees on Air Force bases can provide savings in O&M cost when areas are converted from improved or semi-improved grounds to unimproved grounds used as forestry sites.

Fuels Training to Move to Goodfellow

In about two years, technical training for liquid fuels maintenance folks and their fuels operations counterparts will be moved to Goodfellow AFB, Texas. Included will be classrooms, labs, and a small Type III fueling system. The move is related to the Chanute AFB, Ill., closure.

AFM 85-16 to be Rewritten

A long overdue rewrite of AFM 85-16 is tentatively scheduled for Oct. 22-26, 1990 in Atlanta, Ga. In June, 1990, a representative group of MAJCOM fuels, tech school, and AFESC personnel will do the preliminary planning. The format will have each major topic in a stand-alone chapter or volume. Participants will identify required chapter volumes and outline subject matter to be in each. They will recommend an OPR for each chapter and suggest which MAJCOMS provide the additional experts. The results of the meeting will be sent to all

MAJCOMS for their input. In October, we plan a hard hitting week resulting in a good first draft. Now is the time to tell your MAJCOM fuels guy what you want corrected, added, or deleted. Don't delay; we're going to have to live with what we write in October. It's your manual.

Alvin L. Day AV 523-6357

MAJCOM HVAC Meeting Report

HQ AFESC/DEMM hosted a meeting in Atlanta Apr. 17-19 . Attendees included HQ AFESC, MAJCOMs, HQ USAF, Army, Navy, AFRCEs, and AFOEHL. Items discussed included AFIT, ATC, and CEMIRT training; clorofluorocarbon (CFC) issues in HVAC systems; USAF options on CFCs; the industrial water treatment contract; our USAF heating policy; and indoor air quality. An industry roundtable discussion was held on CFC issues with representatives from Dupont, Carrier, Trane, York, and the International Institute of Ammonia Refrigeration.

Patrick C. Daugherty, AV 523-6346

Programs UPDATE

Fiberglass Mat Operational Testing

The Tactical Air Warfare Center, Eglin AFB, Fla., is conducting the Fiberglass Mat System Initial Operational Test and Evaluation. The test, at Wendover, Utah, lasts until June 15, and will consist of two crater-repair crews repairing eight craters. Four craters will be trafficked by F-4 and F-15 aircraft with some participation by A-10, F-16, and F-111 aircraft, if available.

In addition, HQ AFESC/YER will conduct suitability tests of Distance-to-Go (DTG) markers and Minimum Operating Strip (MOS) edge markers.*

Quick-Set Material Evaluation

The laboratory at HQ AFESC is evaluating four materials as potential replacements for Silikal® as a spall repair material. They will evaluate engineering characteristics, environmental operational ranges, environmental impact characteristics (toxicity), and manpower implementation/procedural requirements. When completed in September, if a suitable replacement is discovered, we will put it in the Air Force supply system, so that bases can order and stock the appropriate spall repair material.*

Dynamic Compaction

The British have demonstrated the concept of using dynamic compaction to reduce upheaval in Rapid Runway Repair. The concept was validated during testing in the spring and summer of 1988. They are in the process of developing the hardware and procedures for fielding a RRR dynamic compactor. We are funding a portion of this concept development and will be observing a test of the dynamic compactor in Scotland the last week in May, 1990. We will evaluate dynamic compaction, pavement planning, and harmonic compaction to decide on the best method of upheaval reduction.*

Flood Grout

The British have validated the concept of Rapid Runway Repair, using a fast-setting cement flood grout. We are working through the Foreign Comparative Testing program to acquire the hardware and material the British have developed. We will evaluate their system for application to our RRR requirements. We are working to have the first demonstration of this concept here in the United States this calendar year.

*Maj. William D. Brinkley, AV 523-6240

Repair Quality Criteria

We conducted two 4-day workshops at USAFE Contingency Training Sites. Instructors ar RAF Wethersfield and Ramstein AB received instructions on selecting Minimum Operating Strips, Repair Quality Criteria (RQC) calculations, and RQC impact on aircraft operations. A total of 14 airmen and NCOs from 7002d CES and 819th CESHR attended the workshops.

1st Lt. Andrew D. Ingram, AV 523-6137

Station Marker Post Kits Acquired

The initial acquisition of station marker post kits has been completed. A total of 44 kits were requisitioned through the GSA depot in Dallas, Texas. The kits are scheduled for delivery to PACAF, CENTAF, and USAFE early in FY90. This is the first of many items HQ AFESC/YE currently has under full-scale development to reach the acquisition stage.*

Tech Order Contract Awarded

We awarded a small business set-aside contract for production of formal Technical Orders (T.O.s). The first effort is a task to convert the interim T.O. for Repair Quality Criteria (T.O. 35E2-4-1) to a formal T.O.

which will then be issued by WR-ALC. Future T.O.s will cover crushed stone crater repair, AM-2 and fiberglass mat, precast concrete slab, and damage assessment/MOS selection/station marker post.*

Front-End Loaders for RRR Studied

HQ AFESC plans to increase the flexibility of the Rapid Runway Repair (RRR) front-end loader vehicles by acquiring quick-disconnect couplers for J.I. Case, Deere, and Hough loaders. At the present time, different brand name attachments will not interface on all three loaders. It is planned to have WR-ALC/MMV procure couplers through DCSC. The contract is to be awarded in September, 1990. First deliveries are scheduled for May, 1991.

*Irene M. McBee, AV 523-6491

Contractor Sought for Glass Mats

Source selection is underway to select a contractor to build operational mats along with installation kits. Contract award is scheduled for June, 1990, with delivery beginning in December, 1990. The contract will run over a period of 5 years, with the first year of production being delivered to PACAF bases and contingency training sites. Follow-on years will provide the full requirement for CENTAF, USAFE, and training.

Perry E. Dukes, AV 523-6203

Fire Threat Analysis Completed

A theoretical fire threat analysis for aircraft constructed of composite materials has been accomplished. This analysis indicates that a fire suppression agent needs to be applied within 15 seconds after a fire develops to a detectable size. A material fire damage assessment is underway to verify this 15-second response time; a burn test facility has been constructed to test and measure actual time to damage for composite aircraft materials exposed to real fires. Burn testing of composite materials is in progress. Required response times determined from this assessment will provide a verifiable basis for design improvements to the present fire protection system.

Bob Rettie, AV 523-6225

Technology Transition

Products for test continue to be ordered. One of the latest items to be identified is a new continuous friction measuring device, which may result in each base being able to measure the friction characteristics of its own runways and taxiways. Invented by Irvine Ltd. of Scotland, the "GripTester" is similar in operation to the Mark IV Mu Meter and Saab friction testers now used, but at about a fifth of the cost.

The "GripTester" or "GT" is a $20,000 unit that is pulled behind just about any vehicle. It is able to measure runway conditions more accurately than the currently available Tapley or Bowmonk meters, but is not limited to snow and ice conditions. It can also measure friction loss due to rubber build up, providing the BCEs an accurate way of assessing the need for rubber removal and ultimately provide the pilots up-to-date assessment of runway conditions.

Since this is thought to be the first one in the United States, other agencies (FAA, NASA, etc.) have also expressed interest in this product. A great find by the ADVOCATE, Capt. Larry Kordosky, HQAFESC/DEMPO, AV 523-6429.

CMSgt. Billy E. Scruggs, AV 523-6227

Privatization Implementation UPDATE

Warehouse May Test Authority

Robins AFB, Ga. includes a proposed private sector development project for a 168,000 square foot warehouse facility. The current operation is contractor operated on-base, housed in two substandard World War II warehouses and seven corrugated metal quonset huts. Previous MILCON projects have been unsuccessful. Project may provide an excellent opportunity to test the new lease-purchase authority (Title 10 USC 2812). We will continue to work with the base team to determine level of AFESC technical support and resources needed.*

AFIT Students Hear AFESC Speaker

Students attending the AFIT Real Estate Management Course (MGT 424) were briefed on private sector development policy, program, process and HQ AFESC technical support capabilities. Also, arrangements were made for the class to tour the prototype, Title 10 USC 2667 Visitors Quarters and Conference Center project under construction at Wright-Patterson AFB, Ohio.*

Bases Set for Housing Market Analysis

Providing technical assistance to HQ TAC/DEH

and HQ AFLC/DEH in development of proposed Statements of Work (SOW) to accomplish segmented housing market analysis for Homestead, Nellis, Tinker, and McClellan AFBs. SOWs coordinated through HQ USAF/LEEH and initiated by one of our Task Order Contractors.

*Wilson A. Nixon, AV 523-6481

Cleaning Contract Standards Revised

Met with representatives from HQ TAC/DE/DEH to plan development of revised Air Force standards for accomplishing contract cleaning of both unaccompanied housing and military family housing in coordination with HQ USAF/LEEH. Work effort will involve survey of private industry to define corresponding standards, development of checklists for Air Force inspectors and Air Force occupants, and development of a generic SOW for concession contracts using revised standards.

Wilson A. Nixon, AV 523-6481 and Brenda Robinson (TAC)

Bases Due New REEEMS

Working with Tyndall base contracting (USAF ADWC/LGCX) to accomplish Residential Energy and Economic Evaluation Manuals (REEEMS) for Hickam AFB, HI, and Mountain Home, Idaho, and two for McConnell AFB, Kan. Technical support studies are scheduled to be completed over the next four months.

Wilson A. Nixon, AV 523-6481, and William Munsie (LEEHT)

Housing and Services UPDATE

AFIT Course Support

Mrs. Gregory presented Parametric Estimating briefs to the AFIT MGT 422, Project Managers Course, and ENG 400, Construction Estimating Course. The MGT 422 lecture emphasized how to conduct and use parametric analyses for development and on course corrections for MILCON projects. In the ENG 400 lecture, more emphasis was placed on what tools are available and where to find supporting data for developing good estimates.*

Tri-Service Cost Engineering System

Mrs. Gregory met with HQ USAF/JACPD, Dayton Patent Prosecution Office of the Judge Advocate General, to discuss the advantages of and means available to buy out or lease commercially developed software and/or data for inclusion in the Automated Construction Cost Engineering Support System (ACCESS). This was requested by the Tri-Service SES meeting in Mr. Cole's office Mar. 6, 1990. The decision for inclusion of specific software and/or data will be largely based on life cycle economic analyses currently being conducted.

*Rita Gregory, AV 523- 6230

Single Best Estimate (SBE) for Launch Systems

Attended briefings on requirements to reconfigure the Space Launch Complex 6 (SLC-6) at Vandenberg AFB, Calif., for the new Titan IV expendable booster. Congressional direction is to use this former Shuttle asset that has never been operational. Requirements consist of a new mobile service tower, umbilical tower, and operations support building. Renovation projects include the launch mounts/platform, propellant and gas storage areas, payload processing, plus miscellaneous support. Total cost for facility-related items will approach $500 million -- the majority will be 3600 appropriations. The total SBE for launch systems including Atlas, Delta, Titan II, and Titan IV will be completed by mid-May.

Chris Krance, AV 523-6266

Parametric Estimating Seminar

AFIT/DEE and HQ AFESC/DEC conducted the first Parametric Estimating Seminar at AFIT April 17-20, 1990. Twenty-eight students participated representing AAC, AFLC, AFRCE/BMS/CR/WR, AFSC, AFRES, ATC, COE, ESC, MAC, NAVFAC, AFSPACECOM, NGB, PACAF, SAC, TAC, USAFA, USAFE, HQ USAF, and PSA. Critique comments were positive with an expressed desire for less background and introduction, more structured hands-on use of the Automated AF Pricing Guide (AAFPG), and the opportunity to use the Construction Cost Management Analysis System (CCMAS).

Maj. Dean G. Fogleman, AV 523-6262

Readiness UPDATE

Readiness Training Roadmap on the Road

HQ TAC, SAC, NGB, and AFRES have been contacted and briefed regarding the Readiness Training Roadmap. Feedback to date has been excellent with many ideas and improvements provided. A central theme developing is that consistent with current defense thinking decentralized is not better. MAJCOMs see a serious erosion in support for active and growing training programs. In the face of hard hitting resource reductions, readiness training is not untargeted. Advocacy and dedicated resource streams are essential for quality training. Lest we forget, our primary mission remains to be ready right now with the right people. Visits to the remaining MAJCOMs are currently being scheduled. We look forward to seeing you.*

Warrior Improvement Plan

The first draft of a "Warrior Improvement Plan" has been completed. The plan is designed to take both long- and short-term initiatives and focus them against issues facing the defense community today and specifically Air Force Engineering and Services Readiness. Using the "Future Vision" issues identified in August 1989 and reviewed by the MAJCOMs at the '89 Worldwide Engineering & Services Conference, the plan addresses such issues a organizational structure, capabilities, basing, and space. Coordination and input from the MAJCOMs will be the next step.*

Combat Air Base Performance Planning

Work is proceeding rapidly on developing the principles of planning and measures of merit which will form the basis of a performance analysis oriented regulation to be used by planners and decision makers. Multifunctional workshops were held in Albuquerque, N. M., which produced a collective body of 54 candidate planning principles. Now integrated, there are 10 basic and two overarching principles that stem from the principles of war and Air Force Combat support doctrine. The next effort, is a high level Performance Planning Symposium engaging the "best minds" in a deliberate process to expand the principles and provide feedback in regards to performance analysis and measures of merit. The by-invitation-only June symposium will draw upon the talent of approximately 50 people for 3 days.

*Lt. Col. John Mogge, AV 523-6121

Engineer Civic Action Teams

HQ AFESC still wants high-quality volunteers for its 8-month Civic Action Team (CAT) TDYs to Chuuk (formerly Truk), and Pohnpei (Ponape). Volunteers completing the TDY receive remote credit and a new overseas return date. For complete details on this TDY see the March, 1990, AFESC Update. CAT deployment schedule is:

LOCATION	APPL CUT-OFF	DEPLOY	RETURN
CHUUK 91-01	27 Jul 90	28 Oct 90	30 Jun 91
POHNPEI 91-02	4 Jan 91	7 Apr 91	8 Dec 91
CHUUK 91-03	10 Mar 91	9 Jun 91	23 Feb 92

Application packages are submitted to HQ AFESC/DEOX, ATTN: Robert McMahon, Tyndall AFB, FL 32403-6001. See your CBPO as your first action for further information.

Robert McMahon, AV 523-6127

Regional Planning

With the recent change in world events, we've expanded our planning roles and responsibilities to include the areas of Low Intensity Conflict (LIC) and regional plans, versus pure deliberate planning. In that light, we recently attended a deployment for training (DFT) conference at HQ USSOUTHCOM, Quarry Heights, Panama. Among the issues discussed was SOUTHCOM's strategy for establishing nation building assistance to the region's military. In concert with SOUTHCOM strategy, DFTs are used to transfer skills, capabilities, and technology by conducting humanitarian and civic action (HCA) training projects in the host nations. Air Force engineering and services support in humanitarian and civic action (HCA) training projects was also discussed at the conference.*

E&S Wartime Engineering Data (WED) Handbook

We recently provided the MAJCOMs copies of the Handbook for Developing AF CE Wartime Engineering Data for review and comment. Included in the package was a pilot unit's WED book as an example. WED consists of wartime facility requirements, utility requirements, and related engineering information about all base-level organizations that deploy together in wartime OPlans. Having solid data on the actual wartime facility/utility requirements of the base deploying units is absolutely invaluable when it comes time to conduct a Joint Support Plan (JSP) site survey or to physically deploy in support of an OPlan.

*Richard L. Jamieson, AV 523-6740

Det 2 AFESC Relocation

Phase I is 25 percent complete and progressing well. The 95 percent design for Phase II is due in early June, and the construction contract will be awarded this fiscal year. Areas of immediate interest are communications, munitions storage, government furnished equipment, and the programming plan for the move.

Capt. Tom Quasney, AV 523-6119

Hurricane Hugo Restoration

Prime BEEF teams have made significant contributions to the continuing restoration of the Charleston, S. C. area. Teams from Laughlin, McConnell, Peterson, McClellan, and Tinker AFBs, along with an Air Force Reserve team from Kelly and Barksdale AFBs, have helped three local governments complete many projects on public facilities that would not have even been scheduled for many months because of the volume of repair work to be done. Besides the teams, engineers from the 10th and 14th CEFs (AFRES) assisted with design reviews of backlogged projects. Additional assistance projected includes two 50-person teams from Hanscom AFB and a team from the 179th CES (Ohio ANG). Teams are receiving excellent training and are truly appreciated by the governments assisted.

Lt.. Col. Richard Woodworth, AV 523-6323

Readiness Challenge '90 (RC90)

RED HORSE will not compete in RC90. Colonel Cavender, AFRCE/BMS, has accepted our invitation to be the chief arbitrator for this year's competition. He will oversee the arbitration when results are challenged. This involves monitoring the activities of line judges, supervising arbitration, and ruling in special cases.

SMSgt. Bill Johnson, AV 523-6442

E&S Laboratory UPDATE

Lab Begins MAJCOM Briefings

The laboratory has presented the first in a series of overview briefings to the MAJCOMS. On May 16, 1990, the DE, DO, LG and SG staffs at HQ SPACECOM were briefed on the mission, recent activities, current work, and future initiatives of the Engineering Research Division and the Environics Division including such topics as Airbase Structures, Operating Surfaces, Fire and Crash Rescue, Hazardous Waste Minimization, and Environmental Restoration. The services available to worldwide users at the Engineering and Services Technical Information Center were also covered. The briefing continued by presenting various methods and programs that the user community can use to identify and document their needs and requirements and translate them into valid research and development programs. The briefing concluded with a presentation on the Airbase Energy/Utility Assessment project.

Colonel Curron, HQ SPACECOM/DE, was positive about the presentation and the need for MAJCOMs to be aware of the programs and services available to them at the Engineering and Services Laboratory.

These briefings will continue at other MAJCOMs through the rest of the year.

Capt. Joseph E. Prendergast, AV 523-6296

Colonel Kennington Says Good-bye

Two of the most important days in your military career are your swearing-in and retirement.

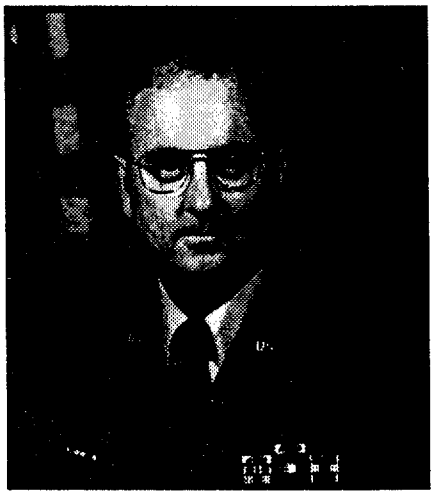
When I came in, the Air Force seemed a strange and indefinite world that was not very like my hometown, or where I went to college. Now, 29 years later, I almost feel the same way about the "civilian world" beyond the gates.

In a few days, I become a newly "commissioned civilian." I hope that I am as fortunate as when I entered the Air Force. From my first assignment until now, it was my good fortune to have truly exceptional people who worked for me and with me. I also worked for outstanding leadership, people who trusted me to do a job, probably gave me more authority and responsibility than I should have had, stood by or coached me when I failed, and cheered me on when I was successful.

Because I had the chance to work with some of the finest people anywhere in the United States Air Force, the people of HQ AFESC, we achieved some truly unprecedented milestones.

Who would have thought in 1982, when General Ellis commissioned Bill Hamill, Barry Wentland and Tom Risher to rent some Wang computers (and learn how to run them) that by 1990 we would be this close to buyout of a total system for Engineering and Services and that it would completely change the fabric of our business? We are almost there, thanks to terrific advocacy by our Computer Applications and Development team, and support throughout the world of E&S.

Who could have thought when Col. Jerry Smith bought the concept of a worldwide Readiness Challenge, that it would grow in excellence to become one of the premier competitions in the Air Force? It did. Credit the people of our Readiness directorate, and the superb team at Det. 2. Who would have thought that we would bring the detachment to Tyndall? We are bringing them here, so credit this fine team and Col. Hank Aulwurm, who convinced me it should and could happen.



Colonel Kennington

Who would have thought there would be a School of Civil Engineering *and services* at AFIT? It is in being, and it is a credit to our Operations and Maintenance and Housing and Services Directorates and the leadership of Air University and AFIT.

Who would have thought that the Air Force and the Department of Energy would explore mutually beneficial research into hazardous waste remediation and minimization and that we would lead the world in reduction of chlorinated fluorocarbons and the disposal of solid rocket fuels? All are realities, thanks to a terrific team in the Engineering and Services Laboratory.

Who would have thought when the Construction Cost Management team was formed that we would be the professional cost analysis software and Independent Cost Analysis focal point for all Air Force construction? We are, and we're proud of our team.

Who would have imagined that we would have an Innkeeper Award as a companion to our Hennessy Trophy? Could we envision billeting and food service standards for our unaccompanied airmen that lead the Department of Defense? All are here today, thanks to our team in Housing and Services.

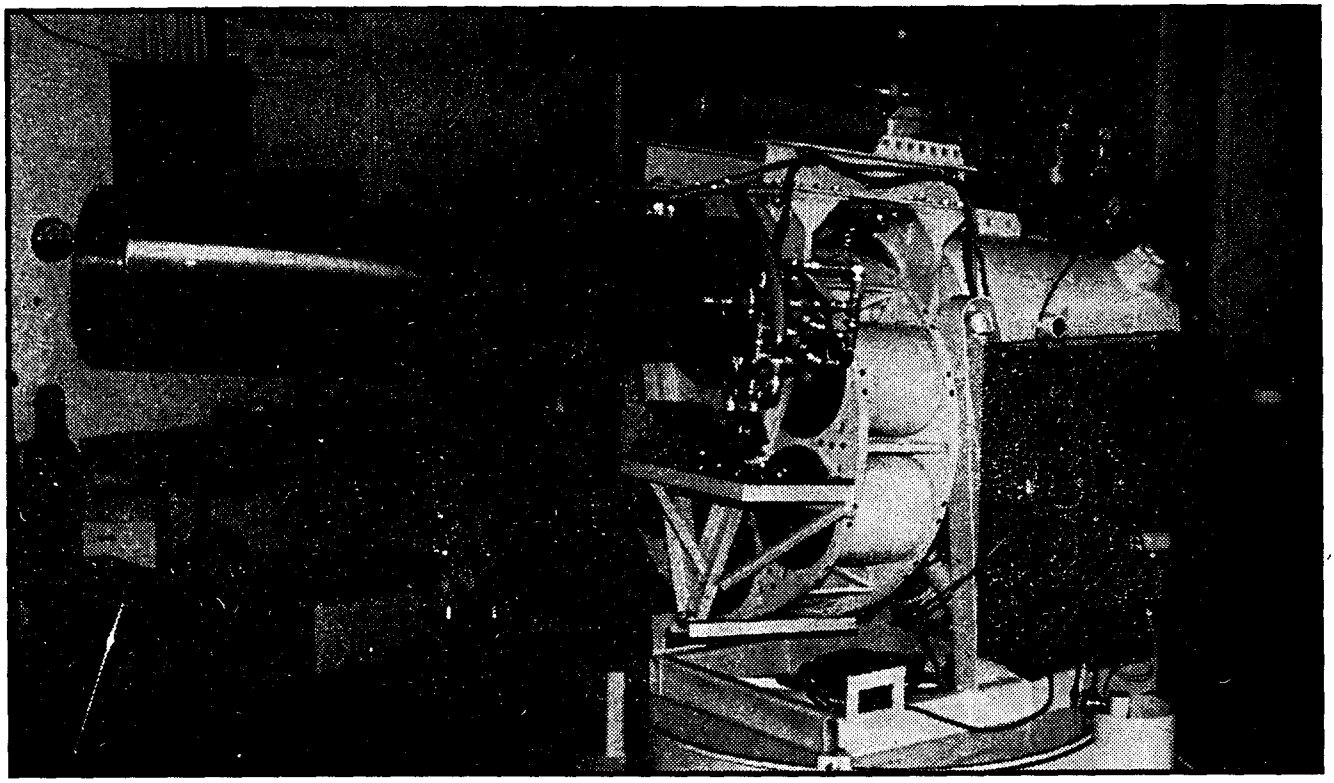
Few could have imagined that we could meet the challenges of manpower and money, and defend our civil engineering forces worldwide. We did, thanks to the Operations and Maintenance directorate. Let's thank them also for streamlining our field service teams to fit the new age of Engineering and Services, preserving the teams most wanted by our bases, while giving to MAJCOMs and bases what they should run in the first place. Every northern tier base can thank the O&M team for at least getting started toward renewal of our snow removal equipment, while getting us on the road to ice detection equipment. O&M can also be credited for the most ambitious peacetime fire equipment renewal program in our history, thanks not only to dedicated O&M teams, but also our partners in Air Force Logistics Command.

My point is that change is going to happen, and AFESC must be flexible and dynamic, and guide and influence change to make things work better; to make the Air Force a better place to work and live; to strengthen our role as a fighting force. HQ AFESC, in conjunction with HQ USAF/LEE, major commands and bases, has persistently worked toward these goals, seizing the opportunity, fighting together when things looked bad.

During my journey I became the first Services officer to serve as the Center's Commander. Like the late Gen. Chappie James, I look forward to the day when no one thinks it unique that a Services officer is an SOA Commander, or a general officer, for that matter.

Let me thank the families, yours and mine. Without family support, many of our achievements would have been impossible. One of our most illustrious generals, Gen. Jack Catton (USAF, ret.), frequently referred to "synergy" -- a condition in which the whole exceeds the sum of all the parts. The synergistic energy, drive and determination that is the Center has been achieved with family loyalty, dedication and support.

God's speed on your life's journey. As you commit yourselves to your new Commander, be willing to work hard to excel! And while working toward new levels of excellence, be unashamed of having fun while at it!



SIX-SHOOTER -- This is the prototype of a fire-suppressant cannon being developed jointly by the Air Force Engineering and Services Center and the New Mexico Engineering and Research Institute. The cannon, designed to be mounted on a truck, can hurl fire-suppressant cartridges with pinpoint accuracy up to 1,500 feet, and will be used to fight aircraft fires. The prototype is now at Albuquerque, N. M.

HQ AFESC
Tyndall AFB, FL
32401-6001

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